RESEARCH PROPOSAL

Effectiveness of Skill Development Programmes in Higher Education in Rajasthan

For Registration to the Degree of

Doctor of Philosophy

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1.Introduction

Skill development may be defined as the process of up gradation of skills to bridge the gap in competency .There are 4 steps involved in skill development -1.Need assessment 2.Conduction of skill development program 3.Measurement of the outcome (competency level) 4.Planning and conduction of new programs as per further need .The Human Capital of the firm includes the knowledge ,skills and expertise of the firm's workers /students accomplished through the process of education and training .The desired competency varies from employer to employer based on the following –

1. Sector of the employer 2. Role (Job profile) of the employee 3. Level of the employee in the organisation (Top , Middle , Lower Management) .

However according to (Scarlat, 2018) some skills are common and are required in all employees irrespective of their **sector , role and level in the organisation** as shown in the figure below .

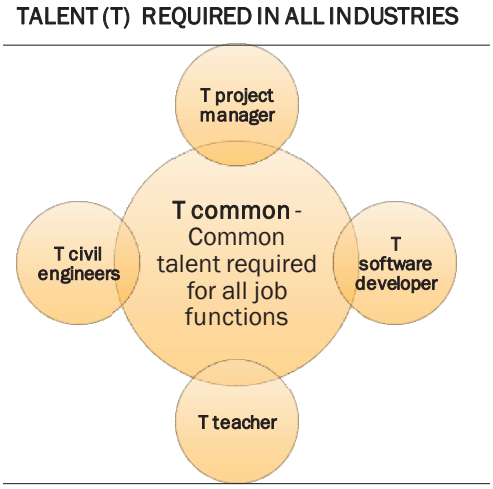
TALENT (T) REQUIRED IN ALL INDUSTRIES
T project manager
T common - Common talent required for all job functions
T civil engineers
T software developer
T teacher

Figure 1 Common and uncommon talent w.r.t job functions (Scarlat, 2018)

Effectiveness can be measured as the ratio of Actual Outcome to the possible or ideal outcome . (Cowan)

Ideal outcome is what we want to achieve and actual outcome is what we have achieved in reality. It is interesting to note that in a process inputs are converted into outputs and

expectations of stakeholders are different from each other not only in form of output but also in form of input .

The **expectations of different stakeholders** are shown below based on Brain Storming and Literature Review–

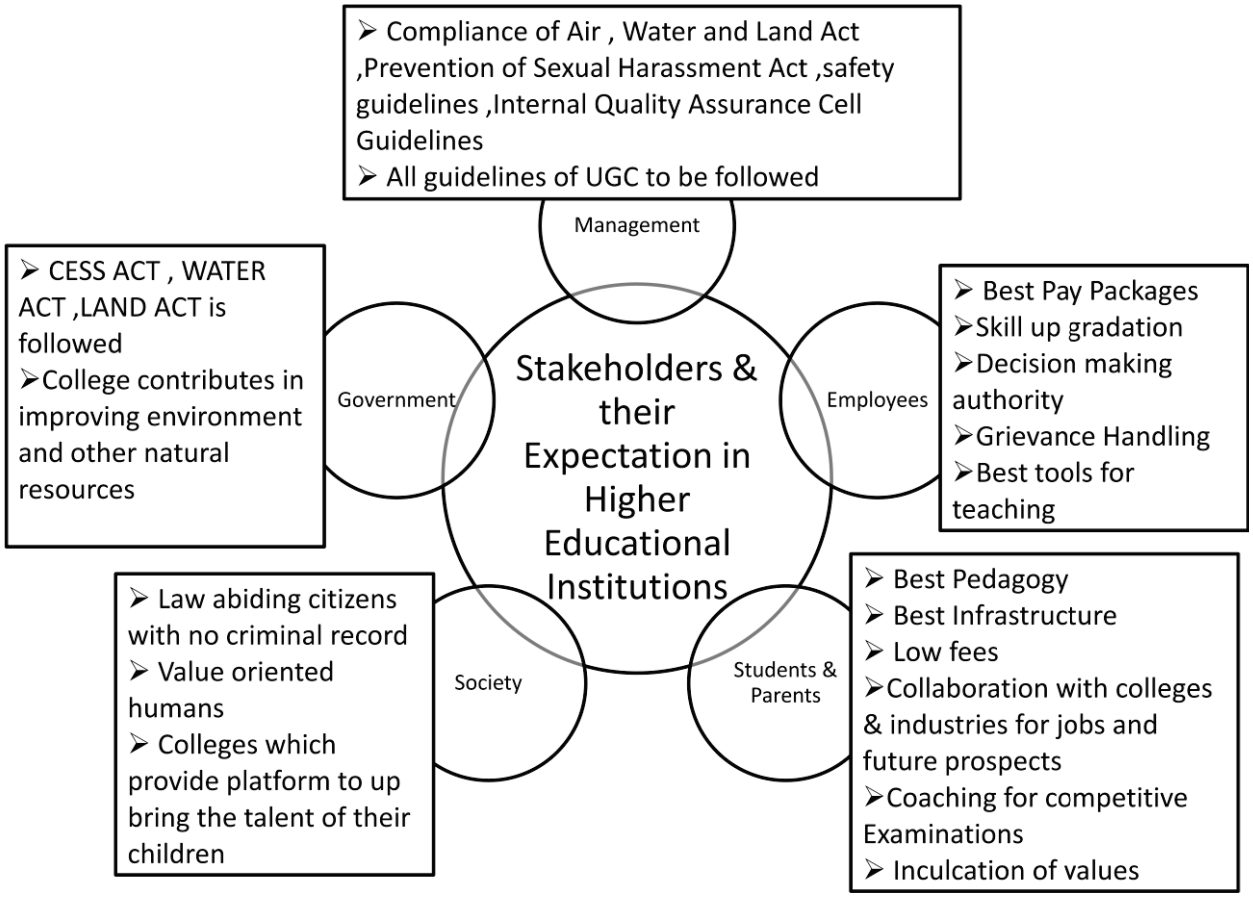
➢ Compliance of Air , Water and Land Act ,Prevention of Sexual Harassment Act ,safety guidelines ,Internal Quality Assurance Cell Guidelines
➢ All guidelines of UGC to be followed
Management
➢ CESS ACT , WATER ACT ,LAND ACT is followed
➢College contributes in improving environment and other natural resources
Government
Stakeholders & their Expectation in Higher Educational Institutions
Employees
➢ Best Pay Packages
➢Skill up gradation
➢Decision making authority
➢Grievance Handling
➢Best tools for teaching
➢ Law abiding citizens with no criminal record
➢ Value oriented humans
➢ Colleges which provide platform to up bring the talent of their children
Society
Students & Parents
➢ Best Pedagogy
➢ Best Infrastructure
➢ Low fees
➢Collaboration with colleges & industries for jobs and future prospects
➢Coaching for competitive Examinations
➢ Inculcation of values

Figure 2 Stakeholders and their expectations in Higher Educational Institutions

Classification of Education System

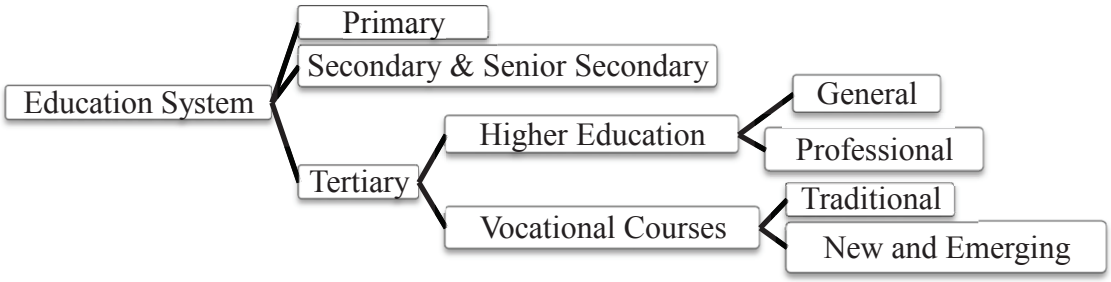

Figure 3 Classification of Education System

Skill Development Programmes in Higher Educational institutions based on the feedback received from various institutions and literature reviews are as follows:

- Basic Programmes – Existing curriculum in respective course of Higher Education
- Personality Development Programmes
- Workshops
- Add on courses or Knowledge boosters in each specialization/Career oriented skill development programmes (Coordinator, 2019)

1.1 Evolution of Higher Education in India Post Independence

There were different commissions formed in India to improve the status and to strengthen Education post independence.

Table 2 Evolution of Higher Education Post Independence in India (Madaan, 2017)

S.No.	Name of the Commission formed	Suggestions/Recommendations
1	1948-1949 Radhakrishnan Commission or University Education Commission	Suggested **integration of Secondary and Higher education by setting up of University Grants Commission** Setting up of **rural universities** was recommended
2	1952-1953 Mudaliar Commission and Secondary Education Commission	Recommended **3 year Secondary and 4 year Higher education system** Advocated setting up of **Multipurpose Schools and Vocational Training Institutes**
3	1961 Committee of Emotional Integration	Established to study the role of educational programme for youth (students in schools and colleges) Established to strengthen emotional integration
4	1964-1966 Kothari Commission	Recommended establishment of Indian Education Services to improve quality of higher education Emphasized on quality of teaching faculties

		Vocationalisation of secondary education was recommended Recommended 6% of the national income should be spent on education Proposed 3 years degree and 4 years Honours degree course
5	1976 :Education subject added in concurrent list	Centre was given the responsibility along with states for all levels of education through entry 25 (42^{nd} constitutional amendment)
6	1968 :National Policy on Education	Proposed imparting higher education through distance learning mode Emphasized on improving quality of higher education Recommended 6% of National Income should be spent on education
7	1993 :Gnanam Committee	Recommended flexibility and autonomy to ensure academic excellence Emphasized on the need for National Commission for Higher Education and Research to regulate Quality of education and research in university Established to restrict the unchecked growth of deemed universities
8	2007 :Sam Pitroda Committee	National Knowledge Commission was set up which recommended a) restructuring of curricula to meet the demand for multidisciplinary professionals b) increase in number of universities to 1500 by 2015 c)Supported entry into foreign universities d)Reducing the burden of affiliated colleges on universities e) Criteria based resource allocation f) Maintenance of standards g) Promotion of excellence in higher education
9	Yashpal Committee	Recommended scrapping of all Higher Education regulatory and monitoring bodies

		Proposed creation of a super regulator (7 member commission of Higher Education and research (CHER),State Higher Education Councils (2nd tier of the system) More attention was given to Undergraduate programmes and multidisciplinary approach to learning Suggested that GRE like test should be evolved for university education It was realized that fragmentation of various fields of Higher Education led to inadequate growth of interdisciplinary learning.
10	Sharma Committtee	Suggested establishment of IIScER Proposed development of Science and Technology in India Proposed expansion of technical education Assured quality Emphasized on access and affordability of technical education Suggested that 500 crore should be spent on research in basic sciences every year by the UGC
11	Anil Kakodar Committee	Recommended strategies to improve technical education in the country Recommended 2% budget in every institution for research
12	K B Pawar Committee	Constituted by UGC it recommended 4 models of Public Private Partnership in Higher Education

The number of institutions are increasing in India since independence and are of various types .

1.2 Key indicators related to Higher Education

The government aims to achieve accessibility of education, equity in education, quality and excellence in education, relevant curriculum which adapts to social, economical and political changes and delivery of Value based education. (Madaan, 2017)

1.Access of Education – providing opportunities and access to all those who deserve education .

Key Performance Indicators –

1. Number of institutions –Higher the number of institutions higher will be the access . India has 903 universities ,39050 colleges and 10011 stand alone institutions listed on AISHE portal . (Government of India, 2018)

2. Total Enrollments – Greater the number of enrollments greater will be the access to education . The **Overall Enrollment in India is 36.6 million .** (Government of India, 2018)

3. GER - The Gross Enrollment Ratio is 25.80 % which represents the % of eligible population (18-23 age group) enrolled in Higher Education . (Government of India, 2018) **.** Around 3/4th of eligible population is still not enrolled in Higher Education and this puts a question mark on the access of higher education to eligible population**.**

4. College density – College density measures number of colleges available per lakh of eligible population (18-23 years age group) which is not uniform throughout the country and is an indicator of the fact that in Bihar only 7 colleges per lakh of population are available but in Telangana and Karnataka there are 51 colleges available per lakh of population which is 7 times to that of Bihar . (Government of India, 2018)

Problems in achieving accessibility –

1. Lack of access to information in Indian Higher Education system

2. Limited capacity of public institutions

3. Existence of differentiated demand

4. Widespread geographical, income, gender and ethnic imbalances (K.Vinothkumar, 2018)

5. Inadequate infrastructure and facilities. (K.Vinothkumar, 2018)

2.Equity in Education – Equal and fair opportunities to all including backward sections (poor and socially disadvantaged groups) of the society .

Key Performance Indicators

1.The Gender Parity Index is 0.97 (52.4% are male and 47.6% females) in India in 2017-18 and that is the proportional representation of female to male . (Government of India, 2018)It represents gender equity and the number of learning opportunities available for women as compared to men and it is also a significant indicator of women empowerment. (Madaan, 2017)

2. Category wise enrollment % (Government of India, 2018)

Table 3 Category wise % Enrollment (Government of India, 2018)

S.No.	Category	%
1	SC Student enrollment	14.4
2	ST Student enrollment	5.2
3	OBC Student enrollment	35
4	Muslim Minority	5
5	Other Minority Community	2.2
6	Persons with Disability	0.203
7	Foreign Nationals	1.26

Problems in achieving equity –

1. Social equity is not there as people who are less in number tend to concentrate on easy disciplines. (Singh & Pal, Nov-Dec 2017)

2. Fees in private sector is high as salaries of the staff (teaching, non –teaching) are paid through the fees which makes education unavailable to ordinary citizens. Cost of technical education is high. (Singh & Pal, Nov-Dec 2017)

3. The representation of SCs,STs, Persons with disability (PWD) and other minority communities in Higher Education is less than their proportion in primary education . Reservations are demanded by OBC's.

4. Indian government provides finances till 9^{th} standard and poor children are compelled to drop out of education due to socio-economic constraints in Rural India. (India G. o., The Constitution (Eighty-sixth Amendment) Act, 2002 inserted Article 21-A, 2019)

5.Peer ridicule exists (social rejection of slow learning students) (S.Surenderkumar & K.M.Priya, 2017)

3. Quality and Excellence – Provision of education in accordance with acceptable standards .Quality is conformance to requirements according to Philip B.Crosby and requirements are laid down in various procedures , rules, standards related to education.

Key Performance Indicators

The major performance indicators related to quality are –

1. Rank of the Institute /University in World Rankings (Shanghai Rankings, Times Higher Education Rankings)

2. Rank in continent based rankings

3. Rank in NIRF (National Institutional Ranking Framework)

4. NAAC and NBA Accreditation grades and scores

Problems in achieving Quality and Excellence –

1. Indian Universities are not at par to attract foreign students. The total estimated student enrollment is 36.6 million out of which 46144 students are foreign nationals. (Government of India, 2018)

2. Indian higher education institutions are poorly connected to research centers. There is a lack of research environment for students and teachers due to lack of funds and support from concerned authorities and because placements are given more importance than research.

3. Industry ready teachers are in scarcity (S.Surenderkumar & K.M.Priya, 2017). Adhoc and guest faculties have worst effect on teaching (K.Vinothkumar, 2018). Teacher's availability also depends on enrollment in post graduate and research courses but **GER is only 25.80 % of eligible population** (Government of India, 2018) and youth dropout is observed. (Aswathappa, 2017).According to recent report of HRD Ministry Premier educational institutions are facing a faculty crunch and nearly one third of posts are vacant. (Singh & Pal, Nov-Dec 2017) . The job of faculties does not only include 16 hours per week of work but there is excessive workload due

to extra-curricular activities being organized in college. The study (Ahmed & Rafiq, 2015) focused on finding the difference in engagement levels of faculties from different departments and different age groups in a college. The vacant faculty positions highlight that Human Resource Planning is not done systematically by taking inputs from supply and demand gap and need assessment based on syllabus review and other changes in educational institutions.

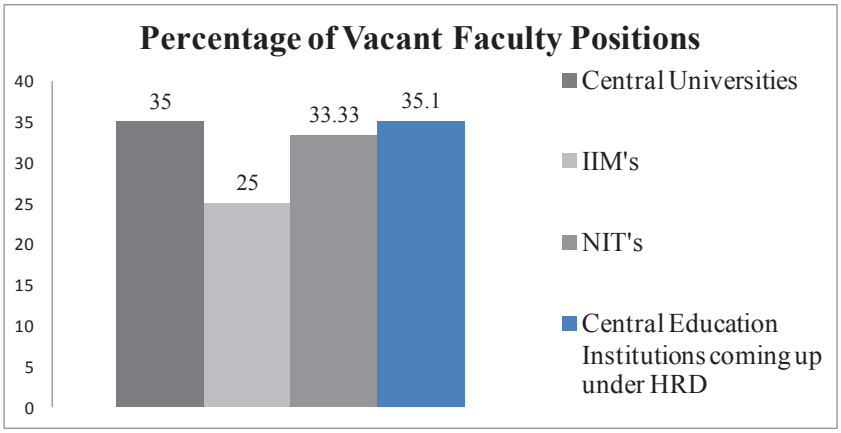

Figure 4 Percentage of vacant faculty positions (Singh & Pal, Nov-Dec 2017)

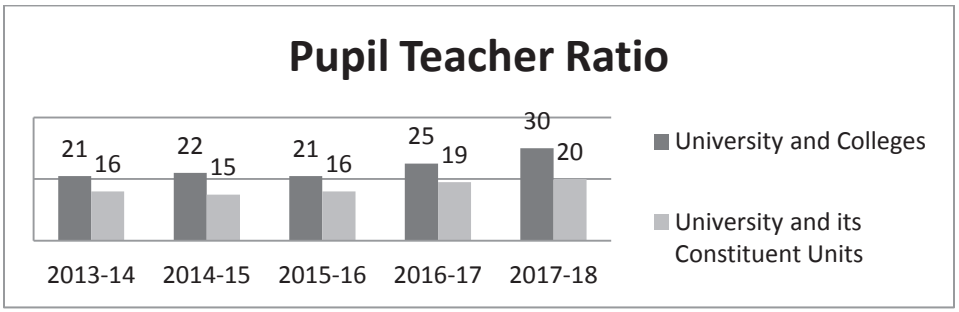

Figure 5 Pupil Teacher ratio over the years in Universities and Colleges and University and it's Constituent Units (Government of India, 2018)

4.Most universities and colleges do not have qualified faculties , teaching laboratories , infrastructure ,libraries . They lack resources and hence can't compete with the universities of the world and none of the universities is in top 100 in QS World University Rankings (Desk, 2016) ,Global Rankings of first 200 universities (Deshpande, Jan-Feb 2018) and Shanghai University's evaluation of universities and research institutes all over the world (K.Vinothkumar, 2018) .In the Asian Universities rankings 2014 10 Indian Universities secured place in top 100 (Deshpande, Jan-Feb 2018) .

5. Traditional teaching learning methods are outdated. (S.Surenderkumar & K.M.Priya, 2017) Very little research is done on teaching learning in higher education in India. (K.Vinothkumar, 2018)

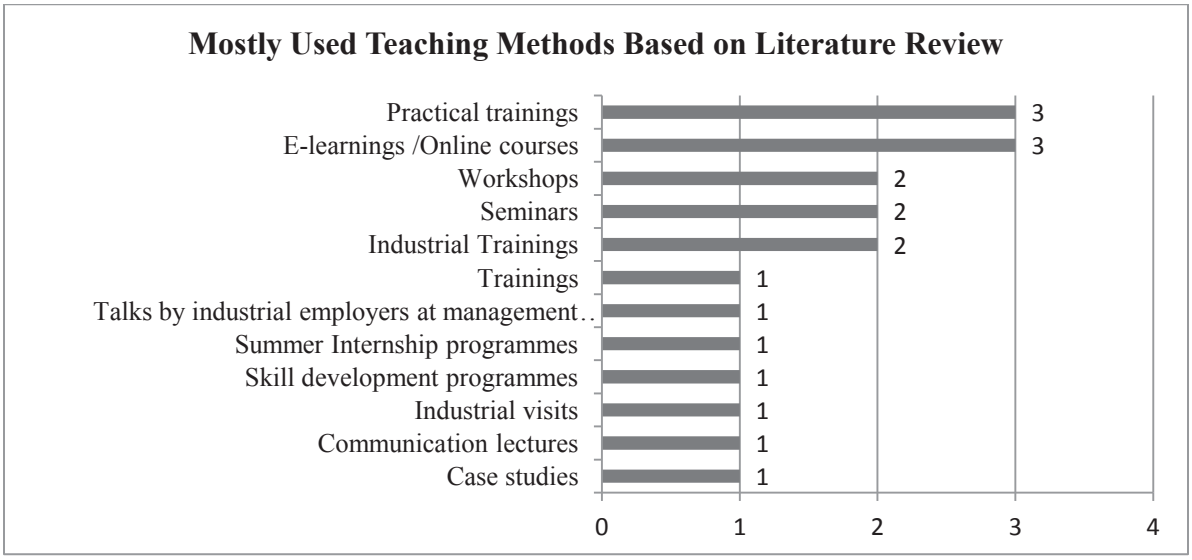

Figure 6 Mostly Used Teaching Methods based on number of papers (Nanda, 2018), (Beckford, 2018) (Manivannan & K.Sadasivan, 2015), (Azami Zaharim, 2009,July 22 - 24) (Verma, 2017), (K.Aswathappa, 2017) (Mishra, 2nd February 2016) (Deshpande, Jan-Feb 2018) (Mandal, 2019)

However the different training methods used for Workers , Managers and Management in different books are listed in the table below . (K., 2017)

Table 4 Training methods used for Workers, Managers, Management (K., 2017)

Training methods for workers and Managers			Training Methods for Management	
On the job	Off the job	Off the job	On the job	Off the job
	Knowledge based methods	Simulation Based Methods	Coaching	Sensitivity Analysis
Job Instruction	Lectures	Case	Understudy	Transactional

training		Exercises	Assignments	Analysis
Apprenticeship Training	Conferences	Role Plays	Job rotation	Lecture courses
Demonstration and examples	Film and TV	Experiential Exercises	Committees and Junior Board of Management	Simulation exercises
	Programmed Instructions	Computer Modeling	Planned Progression	
	Group Discussions	Vestibule training	Syndicates	

6.1 Students expect to get an immediate job but they are not aware of their talents, interests, strengths and weaknesses. They lack understanding of technology used in industry .Mechanical and Electrical companies don't recruit them as it is risky to involve them to work on complex machinery and electrical systems without investing on their training. (S.Surenderkumar & K.M.Priya, 2017)Students aim at scoring high in exams rather than at gaining practical knowledge and skills.

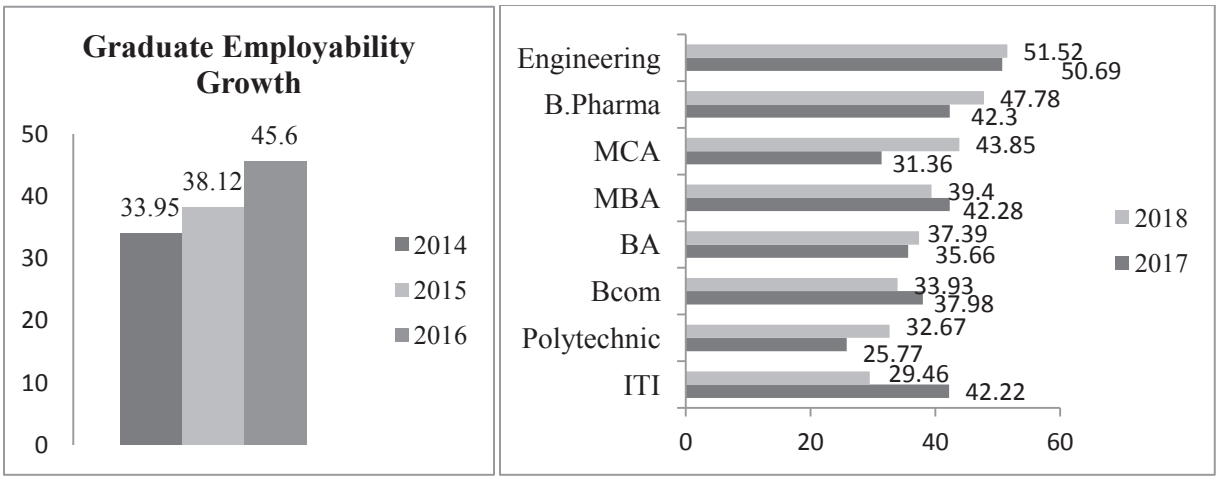

Figure 7: Employability survey conducted by AICTE, CII, UNDP, People Strong, Wheebox (Nanda, 2018)

6.2 Students from rural background have poor communication skills which inhibits their ability to ask questions. (S.Surenderkumar & K.M.Priya, 2017)

6.3 Students join Engineering because of suggestions from relatives and not because of their interest . Freedom of enquiry is missing in young minds .Indian parents educate their children only to earn and seldom to learn . They force their children to join a course without considering their child's interest . (S.Surenderkumar & K.M.Priya, 2017)

7. Accreditation of Medical colleges has not started yet . (K.Vinothkumar, 2018)This can have probable impact on training cost of employers . Training cost of technology and service companies has already increased in this respect and some IT companies are giving 16 weeks training on technology +soft skills and company orientation .

8.Teachers do not have time for self improvement (S.Surenderkumar & K.M.Priya, 2017) because of too much clerical work .Absence of separate HR and Quality departments add the workload of Quality and HR related need based activities on faculties .

10.HR departments still appear to be weak in developing capabilities to take advantage of people analytics .

11.NAAC grades are low and in turn funds are low as grants are proportional to grading .One of the reasons identified for low NAAC grades is that Management concepts are not implemented

before and after NAAC Accreditation . (Shroff, 2016) eg; Talent Management ,Balanced Scorecard are not applied in education sector and there is faculty exodus observed in institutions of Tamil Nadu .Government lacks resources to invest in education .Job hopping is another term for exodus which is observed in IT sector . (Rawal & Bahulikar, January 2019)

12.The foreign universities and institutes have started operating in India because Government of India passed an executive order to allow the top 400 universities to set up campuses in India and allow them to function independently without local partners in September 2013 .

13.Stress is observed in Medical and Dental college students of Chennai . (G. & Jayalakshmi, 2016) Many suicides are reported in newspapers from various regions of India often .

14.Practice of Sudarshan Kriya and Superbrain Yoga is not made mandatory in higher educational institutions for handling stress and better fitness .

15.Inputs from DMIT (**Dermatoglyphics Multiple Intelligence Test**) are not taken .

16.The criteria for literacy is having reading , writing ability and being more than 7 years old . (India G. o., www.censusindia.gov.in) which is not at all challenging to achieve .

4. Relevance of education –Education should be promoted to prepare people who can keep pace with changing economic , social , cultural development of the country . Adaptability in education will result in people who can work well in changing times .

Key Performance Indicators :

1. Number of times syllabus updation was done (reason can be changes in technology, laws, acts, rules and regulations)

2. Approved syllabus covering recent trends from employers with recent approval

3.Employer feedback on employability skills of employed candidates

4.Selection tests to test ability ,aptitude ,interest , health, personality ,background etc .

Problems in achieving relevant education –

1. Industry academia linkage is missing and hence

a) Curriculum designing is not as per the needs of the industry because the pace of changes in curriculum designing does not match with technological changes .

b) Misalignment between industry requirements and available resources is a concern across various sectors .According to NASSCOM's perspective 2020 study industry is facing a shortage of employable talent and companies are hiring people who are trainable and lack skills . (Raja)

2.Formal programs to support and develop managerial and academic staff are not developed by educational institutions .

3.Robotic surgery , Robots in military , 3D Printing , Driverless cars , Artificial Intelligence ,Internet of things ,Robots in construction and Industry 4 Revolution are technology related changes which are changing the job market . (Dasgupta, 2018) (India Q. C.)

5. Value Based Education – Values are inculcated in students during education .

Key Performance Indicator

1.Global Happiness Index which is an indicator of happiness in society .

2.Crime %

3.Number of educated criminals

Problems in achieving value based education –

1. Teaching profession has become a job for salary lacking social responsibility. (S.Surenderkumar & K.M.Priya, 2017)

2. Different organizations have different values and there is no standard curriculum which ensures that all values will be inculcated in students and **there is no way to test values and give a score** .Value measurement is based on the perception of the people who know us and work with us .

2. Review of Literature

1.The author (K.Punjani, 2015) aimed to know about the existing level of Skill Development in India , to analyze the requirement of Skill Development ,to find out the suitable ways to fulfill the requirement of Skill Development through his research paper .The paper advocated greater investment in training infrastructure with special emphasis on supporting casual labour force , institutional structure simplification , inclusion of incentives for private sector participation .The author mentions that skill development policy is successfully implemented in foreign countries but there are no results stated to support the statement except 1 or 2 cases .

2.The author (Sanjeev Duggal, 2016) aimed to make people aware about the existing issues and developments in Indian Skill Development set up . The author believes that industry-academia-government linkage and close partnership will ensure that skill development and vocational training programs become an integral part of the Indian education system else India will lose out on its demographic divided .

3.The aim of the paper (K.Aswathappa, 2017) is to understand and comprehend 1. Issues surrounding vocational education &Issues surrounding training by putting learner first 2.Make a comprehensive profile of the learner by asking questions . Government provides support to learners for all school years but sudden withdrawal of this support in final stage of education seems unreasonable .The learner needs external support through government initiatives in order to become financially self sustained by completing the last tread of his/her educational journey .

4.The UGC Guidelines (Commission, 2012) aimed at making higher educational institutions and other stakeholders aware about the need ,functions and activities, structure, benefits , financial grants related to IQAC and the significance of the reports prepared like AQAR .

5. (V.Ravan, 10th October 2016) in his study explores the employability skills needed by MBA students for getting job and employability skills expected by employers in MBA students. The finding was that different people state different skills as employability skills but the level of these skills required in a fresher are not discussed .There is a need for a global standard like a personnel skill development metric which states what skill and level is required for which role .

6. The purpose of the (Mishra, 2nd February 2016) paper is to study the **perception of employers** as well as **employees towards employability skills for the entry level engineering graduates in companies.** The author advocated that most essential generic skills and attributes that the engineer should possess are technical knowledge and skills and his positive attitude and there is a requirement of updation of syllabus at regular interval to fulfill the needs of the companies .

7. (Nair, 2018) aimed to highlight the flaws of Indian Education System according to the Top Management of firms doing business in India. The other aim was to highlight the needs of Indian Education system which are essential to cope up with the changing demands. Only 5% of the women are at Senior level positions but the reasons for low % of women at senior level are not discussed .

8. The study (Kumar R. , 2015) aimed to identify the advertisements of educational institutions which were complained for non adherence to ASCI (Association of Standards Council of India) .The author also analyzed which advertisements were upheld and the core reasons for which they were on hold . The guidelines have created a positive change for the consumer as it forces institutes to portray reality . 38 institutes were found to violate section 3 of the guidelines as they contained terminologies like 100% job guarantee ,100% placements .The institutes did not mention the disclaimer stating "past record is no guarantee of future job prospects ".

9. The study (Ahmed & Rafiq, 2015) is based on Employee Engagement in academic institutions and is aimed to find out the level of Employee Engagement in an academic Institution, to analyse Employee Engagement among the different faculties of academic institution, to find Employee Engagement with respect to age in academic institutions and to suggest ways to reduce Employee Disengagement. The study was experimental in nature.

10. (Nair, 2018) aimed to understand the current talent management practices in Indian ITES-BPO firms and to understand how talent is defined and the focus and nature of investments related to development of employees .The paper was studied to understand the possibilities of horizontal deployment of talent management practices in educational institutions .

11. (Nongmaithem, 2015) aimed to use the organizational learning framework to understand how the complex interconnected dynamic systems function in Health Care Organizations and to

examine the relationships between Organizational Learning and Organizational culture . Organization Learning which exists in Health Care Organization emphasizes the **need for continuous up gradation of knowledge** and Education is the other sector where it holds importance .

12. (Ashutosh Muduli, 2018)'s study was based on the premise that the better the fit between learning style of the learner and the instructional methodology adopted by the instructor , the more favourable the learning outcomes . The findings of the study have **strategic implications** for the development of **Student-Centered Teaching Methods** and **Curricula** in the Indian Higher Education Sector.

13. The author (Beckford, 2018) mentions the 10 skills that the World Economic Forum has listed and which are needed to thrive in 2020 .The 10 skills are complex problem solving , critical thinking , creativity , people management , coordinating with others , emotional intelligence , judgment and decision making , service orientation , negotiation , cognitive flexibility .Apart from these 10 skills one needs to be creative ,learn how to learn ,read intelligently, take notes ,analyze information ,spot patterns and trends, understand and leverage technology and be culturally aware as well . The objective is to make people aware of what will be required in 2020 to thrive .

14. The author (Kumar S. , 2017) states that it is a huge challenge for MHRD, AICTE, UGC to maintain and improve the quality of education. It is written with the aim to examine E-Governance in Higher Education Institutions of Rajasthan. The author mentions that E-Governance can play an important role in administration (registration, admission, student information) in Educational Institutions which is designed for flexible or structured system and is user friendly. The author has not done any analysis for usage of E-Portals in accomplishing tasks related to Internal Quality Assurance Cells.

15. The objective of the research paper (Verma, 2017) is to make people aware about the Skill India Programme and it's features . The author believes that with skill India more emphasis will be given to areas like real estate , construction , transportation , textile , gem industry etc. where skill development is inadequate or nil . The training programmes would be on the lines of

international level so that youth of the country can meet domestic as well as international demands .

16. The objective of the paper (Scarlat, 2018) is to make talent management professionals aware about the Universal Talent Score utility to assess the talent of teachers in higher education. The author has designed UTS (Universal talent Score) to measure talent of teachers in higher education which acts as an indicator of the competence and value creating capacity of an employee even prior to recruitment .

17. The paper (Manivannan & K.Sadasivan, 2015) focuses on use of Educational Analytics in enhancing quality assurance of a Higher Education Institute like a University. The objective of this paper is to review the available techniques for educational analytics and to explore how an appropriate technique can be used for a large institution of Higher Learning in India. It also aims to develop a model based on educational outcome analysis for implementing quality and governance in higher education institution. The most used DM techniques/methods are **Decision Trees, Networks and Bayesian networks .**

18. Employability skills play a major role in selection by employers nowadays . The author (Azami Zaharim, 2009,July 22 - 24) has done comparison of most sought after skills in Malaysia , Singapore , Hong Kong and Japan . The objective of the study is to find out which entry level skills employers of Malaysia, Singapore, Hongkong and Japan are looking for in engineering students .The 2nd objective is to compare these entry level skill requirements and to find out the differences and similarities.

19. The author (Dasgupta, 2018) mentions that the singular expectation from engineering education is guaranteed employability and return on investment and unemployability is quality of education not meeting market demand . The aim is to find the reasons why 75% of Indian engineering graduates are unemployable and to **highlight the impact of technology on jobs as a game changer** . The McKinsey Global Institute estimates that around one-third of all jobs across 46 nations would be displaced by 2030 appears superficial without sector wise and country wise analysis .

20. The objective of (Nanda, 2018) study is to bring out the fact that employability is on rise in India except for ITI and Management graduates to make people aware . Automation will be a

key disrupter in the jobs market, study showed. "32% respondents claim that automation is affecting 10 to 40% of existing jobs. Engineering, automobiles, manufacturing, consumer durables and core sectors have highest responses of this impact category.

21. The main objective of (Raja) 's study is to make people aware about the blended model (online +classroom) of learning as a solution. The second objective is to ensure that people are aware about the need for carefully thought out strategy for skill development in India . BML is a good solution for those who have family obligations as it provides flexibility and socializing advantage.

22. (Dharane & Malge, 2014) has written the research paper to state measures which can help us achieve uniformity in education and quality enhancement. No data and evidence is available to support the statement that by introducing author stated measures like teaching period of 1 month , new course introduction , 5 days a week etc. quality and uniformity of education has improved.

23. This paper written by (Kumar & K.Annamalai, Jan-Apr 2011) attempts to explain important changes which are prevalent in current technical education and how faculties can be prepared to meet these changes . The author is worried about the decreasing standards and exploitation of the system due to dearth of qualified and committed teachers as large number of engineering colleges have opened in self financing private sector. The author has proposed the kind of faculty development programmes which are required to prepare faculties for handling the expanded roles but no case studies are given to validate that the teachers undergoing such faculty development programmes are committed and are effective teachers.

24. The author (Hussain & Yadav, 2018) aims to sensitize readers about the fact that none of the colleges in Uttar Pradesh have A++ or A+ grade in NAAC Assessment and there is dearth of quality of higher education. The aim is to explain the process of accreditation to some extent and the identified gaps in structure and processes of HEI. The author also emphasizes what is the need of the hour to achieve required quality. The author has mentioned a measure of scrapping the **Academic Performance Indicators** without giving any reason for same .

25. The paper (Shroff, 2016) throws light on NAACs last 10 years data about university and colleges of Gujarat state which are accredited for the first, second and third cycle. It focuses on the set of best practices and their sustenance based on NAAC assessment as the concern is for

quality as a tool to produce superior results and for maintaining high grades in future. There is no analysis on which weaknesses persist in grade B institutions and are acting as the hindrance in achieving Grade A is assessments in Gujarat .

26. The author (Deshpande, Jan-Feb 2018) has shared his opinion about what kind of efforts are required to become a benchmarking educational system, institute, practice. Without any real examples author has mentioned that due to lack of good policies and practices and lack of collective vision, mission and ambition to become a bench marking educational system students are the victims.

27. The paper (Singh & Pal, Nov-Dec 2017) highlights the attainments and challenges in higher education and tries to find out the problems. It also aims to find out the best possible suggestions to cope up with those problems. The author reveals that Government of India passed an executive order to allow the top 400 universities in the world to set up campuses in India and allowing them to function independently which will lead to shutdown of many small scale industries and death of low quality cash generating colleges but students will get access to qualified World Class Educators .

28. The objective of the paper (S.Surenderkumar & K.M.Priya, 2017) is to propose strategies to improve quality of students pursuing engineering in India. The author concluded that educators and students require awareness about latest teaching learning techniques specified by AICTE, the method of Mobile Learning , Blended learning and collaborative learning .Excessive clerical work is done by teachers and the time for their self improvement has reduced .

29. The study (K.Vinothkumar, 2018) is intended to investigate the issues affecting quality in higher education .The National Policy of Higher Education 2016 is also studied and recommendations to improve quality in higher education are given .The author mentions that there is no Indian university in top 100 but the comparison between Indian and other universities parameter wise in not shown in global rankings which can help in further analysis.

30. The author (Shenoy & Dr.P.S.Aithal, 2017) discusses how the top-ranked institutions are successful in terms of placing students and total salary offered is studied. An attempt is also made to explore the various placement strategies, industry-interaction initiatives, and interview scheduling practices of Higher Ranked Management Institutions of India

31. The author (Mandal, 2019) has proposed a newer development in e-learning which is called **Confidence Based Learning** where atomic competencies are derived from learner deficiencies and an algorithm is prepared for same. A case study to illustrate the method at an industry to show the most recent diagnosis and prescription is used. The criteria for finding out the dependency (no dependency, high dependency ,moderate dependency) between atomic competencies is not mentioned .

32. The present study (D'Souza, October 2018) aims to find the effect of Super Brain Yoga on the concentration ,memory and confidence of school students . The study showed significant reduction in anxiety state after the experimental session, enhancement of cognitive functioning and psychological states and a significant decrease in the academic anxiety during adolescence.

33. The purpose of this paper (Sharma, Taggar, & Jain, 2018) is to delineate (describe or portray something precisely) the impact of technology for snowballing the talent competitiveness in developing countries like India. The paper highlights the winning philosophy of the top ranked countries in the GTCI Index . Global Talent Competitiveness Index at country level is computed but it is not computed at state /district / institute level .Ideally it should be the summation of each and every institute GTCI, then District GTCI , then State GTCI and then Country GTCI .

34. The research paper (Basappa.Y.Bangari, September 2018) explores and exposes aspects of public intellectuality in our society. Indigenous (belonging to a native place) knowledge and values of our society are questioned in a set structured framework. Public intellectuals are the people who are putting their creative ideas forward, contributing to the socio-economic development of the society and those who questioned sensitive issues of the society and who have faced crucial situations.

35.The research paper (Shree, January-June 2018) aims at the development of a M-Learning Module for rural women and to find out it's effectiveness . M-Learning for rural women is an effective method for increasing knowledge with respect to balanced diet . There was no significant relationships between gain in knowledge and socio-personal characteristics .

36. The research paper (A.Valdez & Pathak, April 2014) aims to assess the reports generated from the Dermatoglyphics Multiple Intelligence Test administered by selected and recognized DMIT resource companies and consultancy firms in India , to identify historic beginnings of

Dermatoglyphics , to identify salient features of the DMIT and to determine respondents perception with respect to its benefits like the impact it has in enhancing the career guidance programs of academic institutions .

37. The research paper (Choudhary & Rathore, January 2019) aims to study the development of cognitive evaluation criteria in volleyball players of 6 universities of Rajasthan. The purpose of the cognitive criteria was to evaluate the amount of knowledge possessed by the specialization group (state level players) and to what extent cognitive aspect helps to achieve greater performance. The reliability coefficient of the test was 0.78 and the content validity of the test was found acceptable .

38. The study (Ilyas, 2017) aims to conceptually understand the relationship between **acquisition of basic skills** and **learners thinking** during the learning process **when NLP techniques are applied**. The other aim is to examine the innovative ways introduced in instructor's teaching methodology after NLP techniques application in order to make acquisition of skills easier and smooth. The NLP experiment conducted on 8 people consisted of Anchoring (triggering of mind), Framing (Recalling good and bad experiences), Mirroring (to build rapport and trust), triangulation (validating the collected data) and Eye accessing and Meta questioning in conjunction.

39. The purpose of (Kong, 2015) is to review the literature critically and theoretically argue that NLP primarily focuses on individual internal learning so it can be used as a practical approach to develop Human Capital in organizations. The research paper includes the limitations of NLP as a method for building Human Capital . One presupposition in NLP is that people act according to the way they understand and represent the world and not according to the way the world is .

40. The author (Katiyar, January - June 2018) aims to study the literacy pattern of SCs and STs across the states /UTs of India , to measure the social disparity in literacy ,to identify the causes of disparity and to measure the number of years required to attain Universal Literacy for general ,SC and ST population . The author has stated that initiatives like Pradhan Mantri Digital Saksharta Abhiyan will not be successful if people are illiterate and as one fourth of Indian population is illiterate.

41. The author (Kumari, 2019) aims to examine the attitude of parents towards girls child education in Jharkhand state and to increase awareness about the value of girls education in Jharkhand state . Girl child is discriminated based on the socio cultural beliefs and practices where male enjoy a privileged status and girls are ignored ,parents have high expectations of return on investment in boy's education and girls are considered as economic burden by the family and parental and social attitudes are not in favour of girls education

42. The purpose of the study (Rawal & Bahulikar, January 2019) is to understand the challenges of HR department and the reasons of employees job hopping . The author has mentioned that Millennial's (people who are 20-30 years old in the early 21st century)view job hopping as an opportunity to grow their career and earn more money . The author concludes that there is no positive relationship between Human Resource Practice and Job Hopping and that there is a positive relationship between business environment and job hopping .

43.The aim of the study (D.Mane, September 2015) is to find out the similarities and differences between 2 accreditation standards NBA and NAAC . The colleges prefer NAAC accreditation because of lesser documentation and use of mapping and use of rubrics (headings on documents /a set of instructions) in NBA Accreditation and probably because of lesser fees . The comparison criteria of NBA and NAAC is of 2015 and after that NAAC and NBA criteria are further updated by the respective bodies.

44. The research paper (G. & Jayalakshmi, 2016) aims to find out the courses having high levels of mental stress in students and to find out the reasons of high level of stress in students so that it can be eliminated and reduced . Students of dental colleges and MBBS suffer maximum from stress and counselling, moral support, advice and information on educational loans and interactive sessions with great people are some of the solutions for different types of stress .

45. The aim of the study (Zope & Zope, 2013) was to assess and provide a comprehensive review of the physiological mechanisms, the mind body connection and benefits of **Sudarshan Kriya Yoga (SKY)** in a wide range of clinical conditions. Scientists are trying to show that it is an evidence based treatment and is effective in treating stress and anxiety , PTSD , depression , stress related medical illness , substance abuse and for rehabilitation of criminal offenders.

46. The paper (Trakru & Jha, 2019) studies the effectiveness of e-learning as it relates to the e-learning experience of students undertaking higher education. More specifically the study deals with evaluating the effectiveness of e-learning across gender, course and city .Further research can be taken on effectiveness as a parameter in higher education by defining different ideal (desired) outcomes with respect to different stakeholders .

47. The article (Cowan) describes the definition of Effectiveness and Efficiency .According to the author both efficiency and effectiveness are ratios ,they each express different aspects of a given process .Efficiency is the ratio of output to input ;effectiveness is the ratio of the actual outcome to the possible or ideal outcome .

2.1 Summary of Literature Review

a)Theme wise and Country wise classification of Reviewed Literature

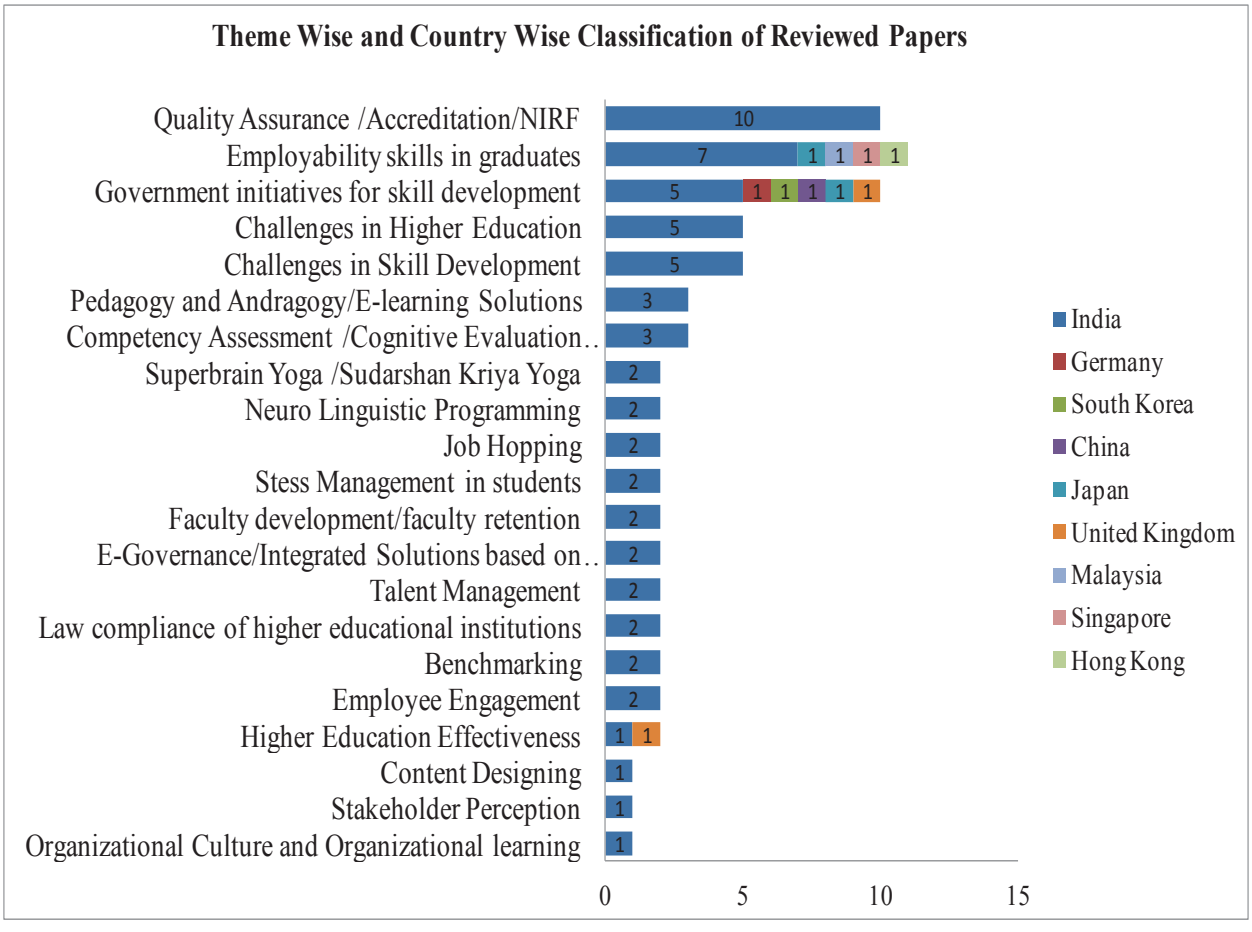

Figure 8 Theme Wise and Country Wise Classification of Reviewed Papers

b) Source wise and year wise article review

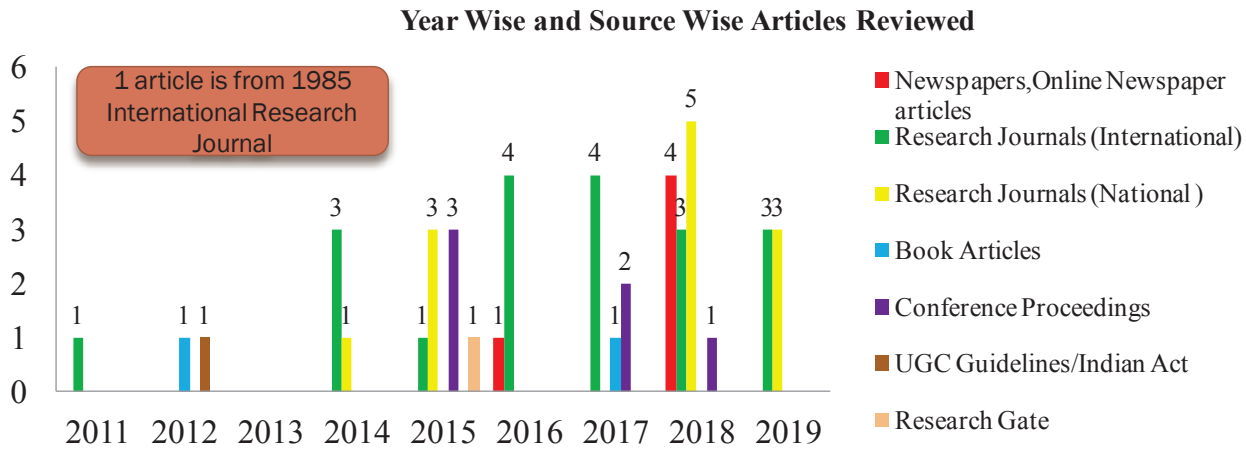
Year Wise and Source Wise Articles Reviewed
1 article is from 1985 International Research Journal
Newspapers,Online Newspaper articles
Research Journals (International)
Research Journals (National)
Book Articles
Conference Proceedings
UGC Guidelines/Indian Act
Research Gate
2011 2012 2013 2014 2015 2016 2017 2018 2019

Figure 9 Year wise and Source wise article review

c) Source wise % of articles / papers reviewed

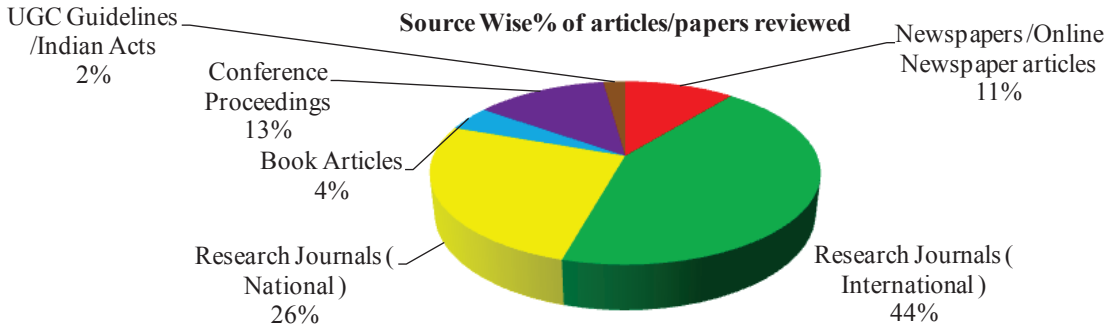
Source Wise% of articles/papers reviewed
UGC Guidelines /Indian Acts 2%
Conference Proceedings 13%
Book Articles 4%
Research Journals (National) 26%
Newspapers /Online Newspaper articles 11%
Research Journals (International) 44%

Figure 10 Source wise % of articles reviewed

d) Articles involving Primary and Secondary Data

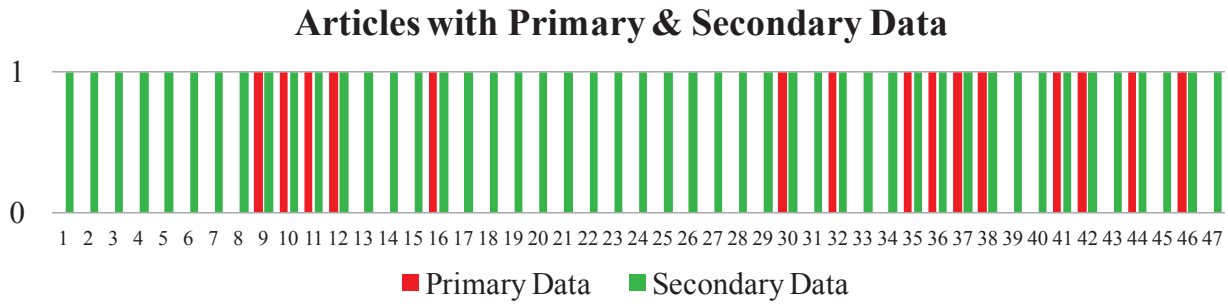

Figure 11 Articles having Primary and Secondary Data

e) Percentage distribution of articles involving different data types

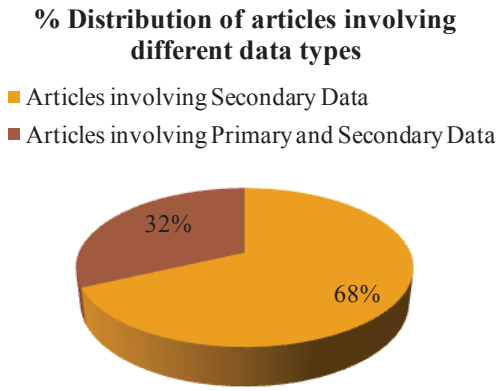
% Distribution of articles involving different data types
Articles involving Secondary Data
Articles involving Primary and Secondary Data
32%
68%

Figure 12 % Distribution of articles involving different data types

f) Article Wise Impact Factor

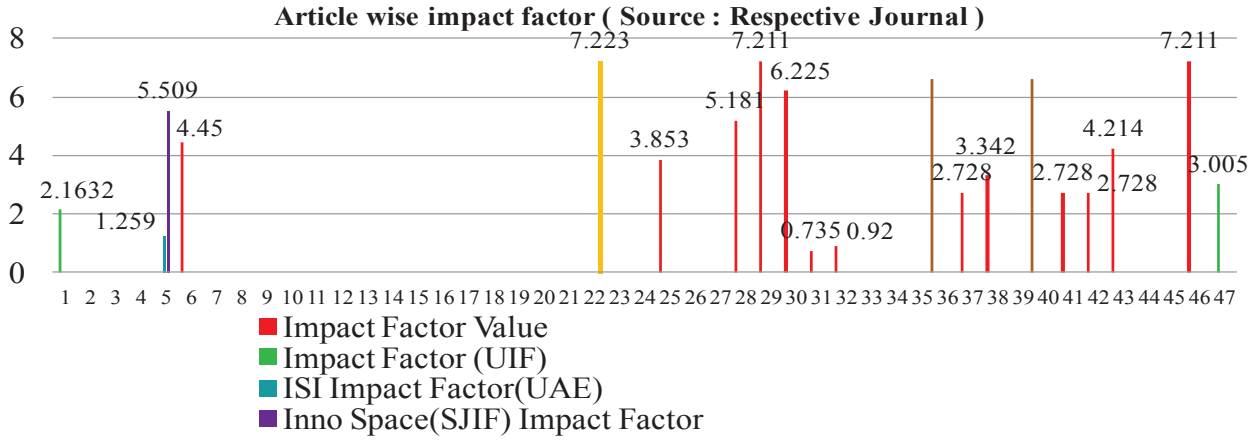

Figure 13 Article wise impact factor

g) Article Wise Citation Details

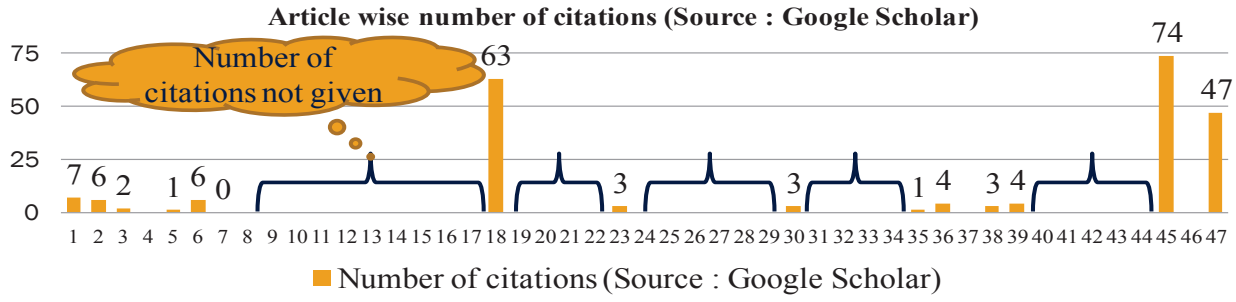

Figure 14 Article wise number of citations

3. Motivation and Relevance

3.1 Motivation

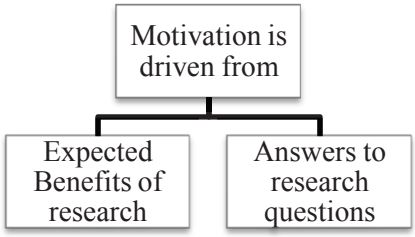

Figure 15 Drivers of Motivation

Some of the expected benefits of the research are –

1. Clarity in the variation in employability skills required sector wise and role wise to students, educational institutions and parents will be achieved.

2. The major factors influencing employability of MBA students will be known and by exploring these factors with the support of experimental analysis some real solutions can be found out .The solutions which will emerge are expected to improve the employment in numbers, employability through competency and industry academia linkage by introducing a new system which will communicate changes in skill requirements instantly to the institute placement coordinators.

3. The challenges in skill development due to various reasons like resource deficit (deficit in manpower (number of faculties), machines (any equipment which enhances skill acquisition), material (training material) , methods (teaching methodology/pedagogy) and environment (conditions inside classroom like temperature , pressure , humidity ,seating capacity , sound proofing etc .)) will be known to the stakeholders .

4. The selection methods used by different sector employers skill wise will be explored and methods will be ranked with respect to their performance in maintaining reliability , validity , standardization and objectivity .This analysis will also help in finding which is the most used and not used selection method by employers of India and why .Such information will be useful in designing the placement strategy of the institute .

5.Placement is the most desired expected outcome of education and the study will explore different placement strategies of different types of institutes and their relative success in achieving results .This can help us in finding out what are the best practices of most successful institutes and what are the weaknesses of the institutes which are lagging behind in placements .The best practices can be adopted by all institutes and weaknesses should be avoided .These inputs can make the institutes better prepared with respect to placements .

6.Effectiveness will be measured with respect to different desired outcomes .The way we measure effectiveness and for which different outcomes will be known .

3.2 Research Questions

The research will provide answers to the following research questions.

1. What are the factors that affect skill development programmes conducted for Management students?

2. What are the challenges in effective skill development of Management students?

3. What are the skills required by different sector employers in Management students?

4. Which are the different selection methods and techniques used by different sector employers for selecting Management students?

5. Is the institute having an effective industry academia linkage and effective placement strategy ? Is there a relationship between industry academia linkage and placement percentage ?

3.3 Research Gaps

The future directions of research or research gaps will emphasize on the relevance of research . If work is done in the direction of research gaps new knowledge will be added to existing body of knowledge .The research gaps are classified as General gaps and Content related gaps.

General gaps :

1. Lack of experimental research design was observed in reviewed research papers .

2. Lack of explanatory research was observed as most of the statements in research papers lacked substantial evidence.
3. Lack of applied research was observed in reviewed research papers .

Content related gaps:

Research done on skill development through vocational courses are available in abundance but there are very less number of researches that are available on skill development through regular courses targeting the factors that effect skill development , challenges in skill development , skills required by different sector employers in management institutes ,selection tests used by employers in skill development ,industry academia linkage and placement strategy and relationship between environmental factors and their impact on skill development .

1.The methods of selection used by different recruiters / employers are different for different skills .For eg : An automobile company selects candidates on the basis of communication skills and knowledge about automobile technology but a Solar Panel company might want candidates with knowledge about solar panels and good communication skills .The selection methods used are also numerous for one skill .The reliability ,validity ,subjectivity and standardization of selection tests is to be explored .There is no standard agreement like Washington Accord which is an International agreement between accrediting agencies for Engineering Education .

2.The review of literature reveals that industry academia linkage is missing and hence the placement planning is questionable in **Indian universities and institutes** .The requirements must be taken from recruiters not only in terms of number of candidates required but also in terms of skill set required for different positions and then a training plan is to be devised based on inputs but planning is not based on inputs .There was no research paper written on training plan based on inputs from recruiters and faculties .

3. Research papers are written on employability skills required in MBA, Graduates and Engineering students but no research paper covered factors affecting employability .The factors affecting employability are to be segregated in controllable and uncontrollable factors. For eg: A new skill requirement by recruiter can be covered up by a training course but lack of employment opportunities are not in hands of the colleges /institutes.

4.The review of literature revealed that no Indian institute is in top 200 in World Rankings .There are no research papers written comparing the Indian ranking standards with world ranking standards .The Indian universities and institutes can benchmark the top institutes of the world on the parameters in which they are lagging behind which are revealed during comparison and list down the challenges in improving on these parameters .

5.None of the research papers discussed the mechanisms for Acts, Laws ,Rules and Regulations implementation at various educational institutions .

6.Effectiveness of e-learning is measured in one of the reviewed papers but effectiveness as a parameter for all stakeholders and their ideal (desired) outcomes is yet to be explored .

3.4 Significance of Study

The study is significant from the perspective of various stakeholders in higher education .

1. Society – The society aspires to have people who have high values are law abiding and who return back to society in some form . If people become employable then they will be able to contribute in Gross Domestic Product well and all economic indicators like GDP ,Net Factor Income from Abroad of the country will flourish .If Higher Educational institutions will make students aware about the Employment Act the students will know that failing the substance abuse screening act they will not be hired and in turn evils like drug addiction will reduce in society .The unemployment problem will be solved to some extent .

2. Government – The government will also be benefitted if there will be compliance to the laws, acts related to Employment .If Management students will gain employability skills most sought after by employers of different sectors the unfilled job vacancies which are not filled yet will be filled easily .

3. Management – If industry academia linkage will be strengthened then the quality of the students will improve as Quality is conformance to the requirements of the customer .The best placement strategy can be designed to achieve better results . The Management will be aware about which kind of courses are to be conducted to bridge the skill gap .Implementing the same selection test as used by the employer the institutes can give students a better exposure during

pre placements . The institutes will score better in the **World Rankings, NIRF and NAAC Accreditation.**

4. Faculties - By the knowledge of preferred learning style of students the faculties will be able to design their lecture content in a better way and learning outcome will be better .By the measurement of actual and desired learning outcome teachers can improvise and deliver better lectures.

5.Students – If students will be aware of the skills that employers expect from them they can be industry ready .Better skilled students will be better teachers and the problem of faculty shortage can be reduced to some extent .Students will be aware about substance abuse screening tests and other selection tests .The defining of learning outcomes will be beneficial for students as they will come to know what is to be achieved .

4.Research Objectives

Based on the literature review following objectives are decided.

1. To find out the factors that influence skill development in Management Students.

2. To find out the challenges in achieving **effective** skill development in Management Students.

3. To find out the skills required in Management students by employers of different sectors.

4. To find out the selection methods & techniques used by employers of different sector (skill wise) for testing the skills of Management students.

5. To find out the effectiveness of placement strategy and the effectiveness of existing industry academia linkage of different institutes.

6. To find out the effectiveness of skill development programmes offered by Management Institutes of Rajasthan .

5. Hypothesis and Statistical Tools to be used

Table 5 Hypothesis and Statistical and Other tools to be used

S. No.	Hypothesis	Statement	Statistical and other Tools to be used
1	Ho H_1	There is no significant difference in the factors that affect the skill development of management students in different institutes. There is a significant difference in the factors that affect the skill development of management students in different institutes.	ANOVA Exploratory and Confirmatory Factor Analysis
2	Ho H_1	There is no significant difference in the challenges in effective skill development of management students of different institutes. There is a significant difference in the challenges in effective skill development of management students of different institutes.	ANOVA
3	Ho H_1	There is no significant difference in skills required in management students by different sector employers. There is a significant difference in skills required in management students by different sector employers.	ANOVA
4	Ho H_1	There is no significant difference in the selection methods / techniques used by different sector employers for selecting Management Students. There is a significant difference in the selection methods/ techniques used by different sector employers for selecting Management Students.	ANOVA
5	Ho	There is no relationship between effective industry academia linkage and placement percentage of different institutes.	Chi Square Test of

	H_1	There is a relationship between effective industry academia linkage and placement percentage of different institutes.	Association
6	Ho H_1	There is no significant difference between the skill development programmes offered by different Management institutes of Rajasthan . There is a significant difference between the skill development programmes offered by different institutes of Rajasthan .	ANOVA, Test of proportions
7	Ho H_1	There is no significant difference in the effectiveness of skill development programmes offered by different institutes of Rajasthan . There is a significant difference in the effectiveness of the skill development programmes offered by different institutes of Rajasthan .	ANOVA, Test of proportions

6. 1 Skills Required in MBA Students based on Literature Review

Skills required by employers in MBA Students are –

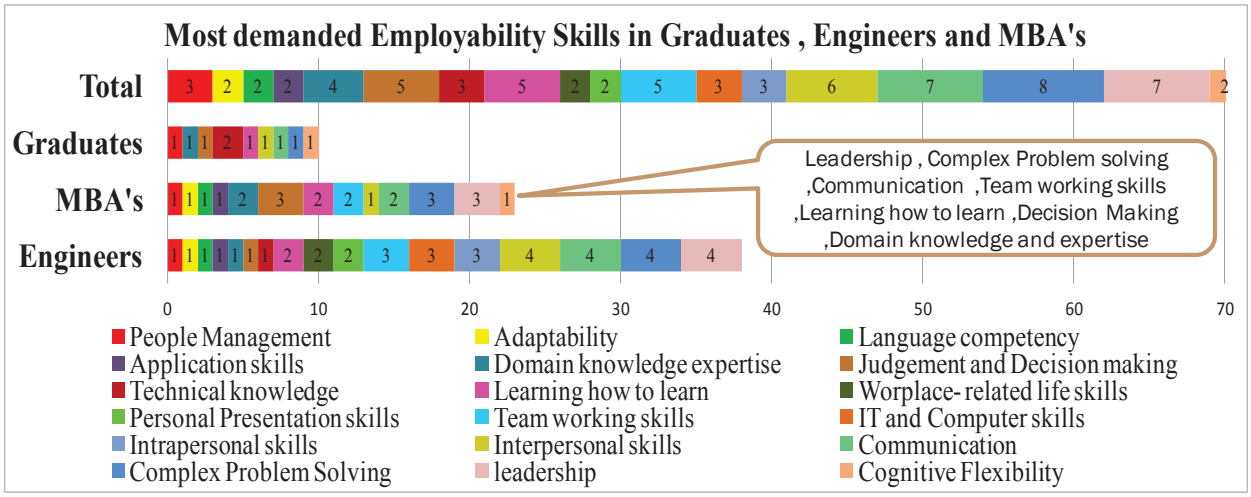

Figure 16 Most demanded employability skills in Graduates, Engineers and MBA's (Beckford, 2018) (Dasgupta, 2018) (Nair, 2018) (Azami Zaharim, 2009,July 22 - 24) (Mishra, 2nd February 2016) (V.Ravan, 10th October 2016) (Nanda, 2018)

Most sought after skills in MBA students based on literature review are –

1. Leadership 2. Complex Problem Solving 3. Communication 4. Team Working Skills

5. Learning how to Learn 6. Decision Making 7. Domain knowledge and expertise 8. Cognitive Flexibility 9. Interpersonal Skills 10. People Management 11. Adaptability 12. Language Competency

6.2 Factors Influencing Employability

1.Student learning style (words and language ,numbers and logic ,sounds and rhythm ,physical experience and movement ,touch and feel ,pictures , shapes , images , 3D ,Human contact , communication , cooperation ,teamwork , self reflection ,self discovery) (Gardener)

2. Student incompetency to understand advanced skill (eg: Language, Communication can be a barrier in achieving desired results

3. Faculty incompetency due to a new course introduction (Joohi Chaturvedi A. C., 2018)

4. Obsolete curriculum due to poor industry academia linkage, no standardized mechanism like Quality Function Deployment to take requirements from employers (Joohi Chaturvedi A. C., September 23-24 ,2015)

5. Pedagogy - The factors influencing pedagogy are listed below :

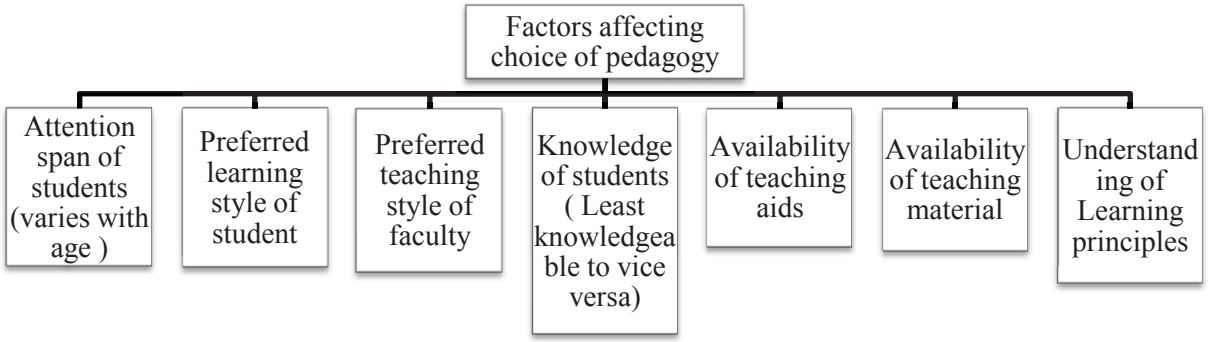
Factors affecting choice of pedagogy
Attention span of students (varies with age)
Preferred learning style of student
Preferred teaching style of faculty
Knowledge of students (Least knowledgeable to vice versa)
Availability of teaching aids
Availability of teaching material
Understanding of Learning principles

Figure 17 Factors having an effect on pedagogy

6. Vacant faculty positions

7. Engagement of faculties which depends on other factors as shown below

Figure 18 Factors having an effect on faculty engagement

8. Stress in students

9. Substance abuse in students on campus

10. Machine (any equipment which acts as an aid in learning eg: Projector) not working because of maintenance not done , short circuits , electricity unavailability etc.

11.Training material availability

12. Skill gap not known in faculty competency as no practice of competency mapping is there

13. Technology validation before use (eg: students suffer from insomnia ,radiation and other health problems)

14. Technology without human values (eg : Brain implants which can result in serious health problems)

15. Placement planning to avoid unemployment because of shortage of jobs in market

16. Classroom environmental variables adherence (eg: temperature, pressure, humidity, noise and radiation)

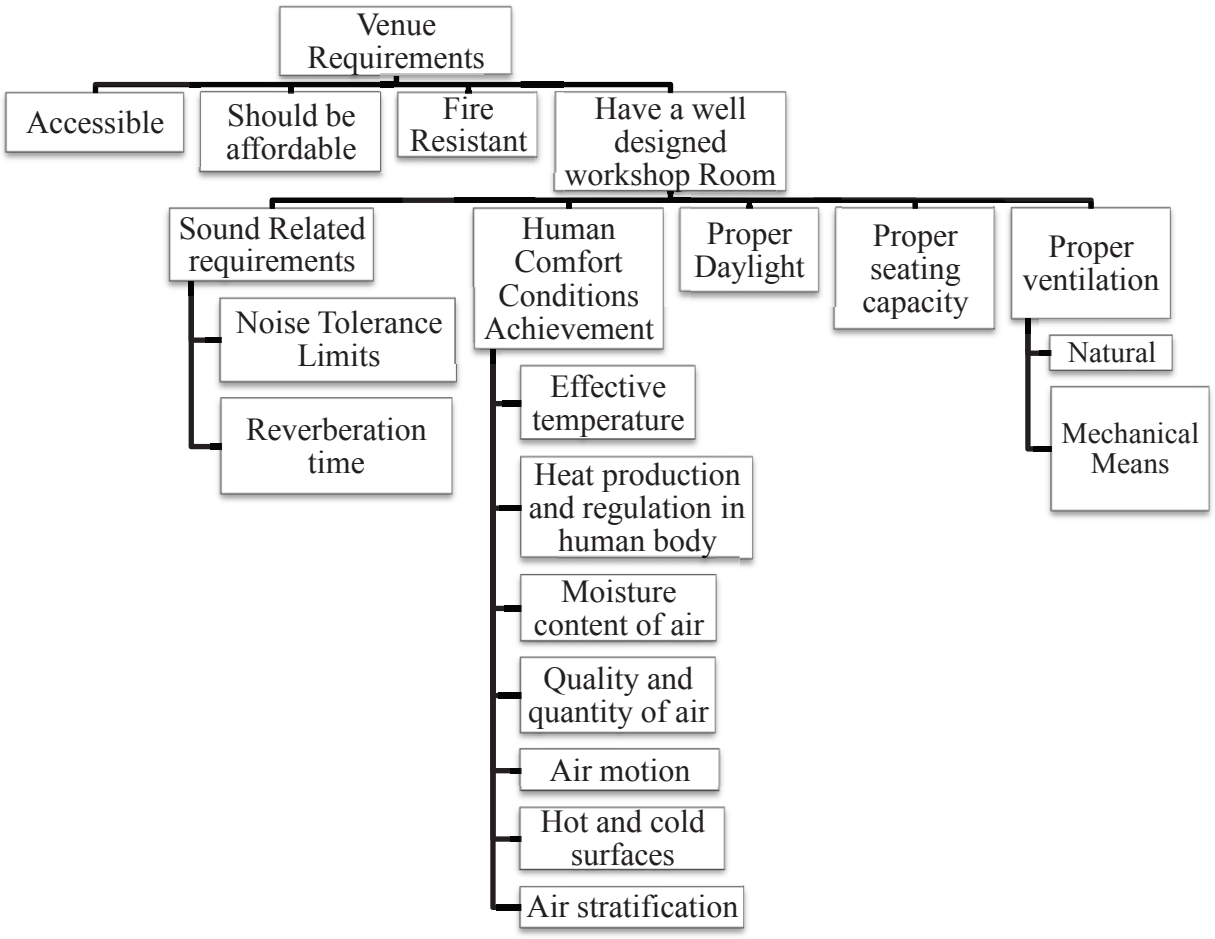

Figure 19 Venue requirements during classroom lecture

17.World Rankings of universities in all their core missions : teaching , research , knowledge transfer and international outlook

18.NIRF (National Institutional Ranking Framework) scores in parameters related to teaching , learning and resources , research and professional practice ,graduation outcomes , outreach and inclusivity and perception ,

19.NAAC Accreditation Grades and Scores (7 Criteria and 34 Key Indicators (KIs))

20. Enrollment in type of MBA (Part time , Regular , Integrated , Distance Learning Course)

6.3 Approach

During a process inputs are converted into outputs.

The variables can be defined as input variables (independent variables) , output variables (dependent variables) , Extraneous variables (variables which have an effect in the relationship between inputs and outputs) and interlinking variables (variables without which the relationship between independent and dependent variables is incomplete) .

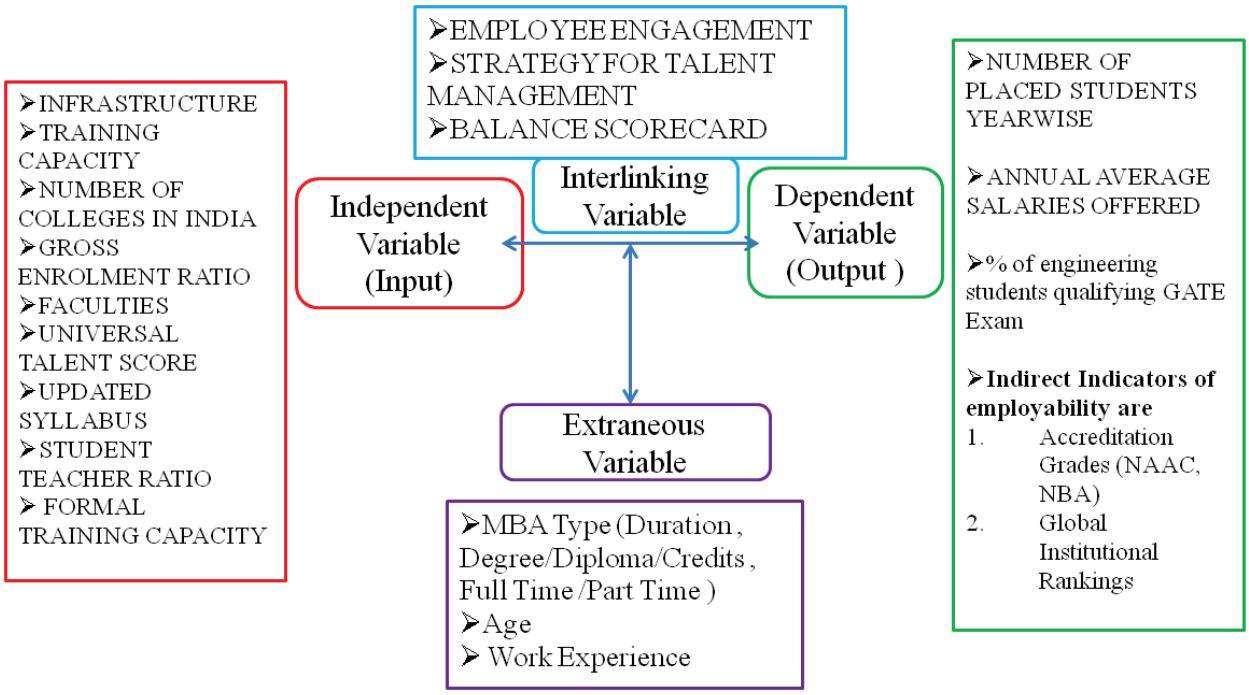

Figure 20 Some of the controllable and uncontrollable Independent, Dependent, Interlinking and Extraneous variables

6.4 Skill Development Programmes in Management Institutions

Table 6 Skill Development Programmes in Management Institutions

Basic Programmes	**Personality Development Programmes**	**Workshops**	**Domain Specific Certifications /Add on courses /Career oriented skill development programmes**	**Knowledge Boosters in each specialization/ Seminars /Industrial Interactions / Industrial Visits**
Existing Curriculum	Public Speaking	Research Methodology	Domain specific IGNOU Courses	Guest lectures by eminent personalities from different industry and academic sectors
	Group Discussion	SPSS Software	National Institute of Securities Management Courses	Leadership
	Interviews – Mock and Stress	Project Management	NSE ACADEMY'S Certification in Financial Markets (NCFM) Courses	Start up talks
	Extempore	Business Communication	Data Analytics	Stock market
	Communication	Customer	Python	Business

	Skills	Relationship Management		Intelligence
	Body Language	Guerilla Marketing	Basic and Advanced Excel	Time management
	English Speaking Course		Digital Marketing	Stress management
			IT Securities	Total Quality Management
			Google analytics	
			Business Analytics	
			R programming	
			French DELF	

7.Plan of Work and Methodology

7.1Research Design and Research Instruments

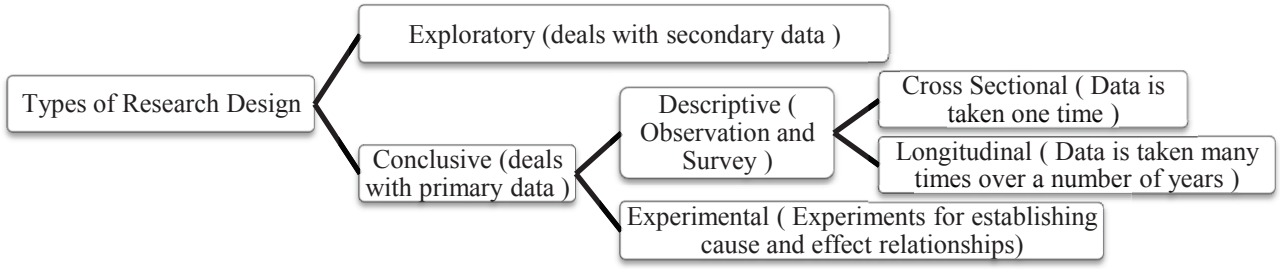
Types of Research Design
Exploratory (deals with secondary data)
Conclusive (deals with primary data)
Descriptive (Observation and Survey)
Cross Sectional (Data is taken one time)
Longitudinal (Data is taken many times over a number of years)
Experimental (Experiments for establishing cause and effect relationships)

Figure 21 Types of Research Design

Table 7 Objective Wise Research Design and Instruments

S.No	Objective	Research Design	Research Instrument
1	To find out the factors that influence skill development in Management Students	Exploratory ,Descriptive, Experimental	Secondary Data from literature review , Questionnaire for students
2	To find out the challenges in achieving **effective** skill development in Management Students.	Exploratory ,Descriptive, Experimental	Secondary Data from literature review , Questionnaire for students
3	To find out the skills required by different employers in MBA graduates.	Exploratory , Descriptive , Experimental;	Secondary Data from literature review , Questionnaire for Employers
4	To find out the selection methods/tests /techniques used by employers of different sector (skill wise) for	Exploratory ,Descriptive, Experimental	Secondary Data from literature review , Questionnaire for Employers

	testing the skills of MBA graduates.		
5	To find out the effectiveness of placement strategy and the effectiveness of existing industry academia linkage of different institutes.	Exploratory ,Descriptive , Experimental	Secondary Data from literature review , Questionnaire for Placement Coordinators
6	To find out the effectiveness of skill development programmes offered by Management Institutes of Rajasthan .	Exploratory ,Descriptive , Experimental	Secondary Data from literature review , Questionnaire for Placement Coordinators

7.2 Scope of Study

Table 8 Universe , Population and Proposed Sample Size

	Employers	Higher Educational Institutions	MBA Students
Universe	All the employers who employ students from higher educational institutions.	All the Higher Educational institutions .	All the students who study MBA across the globe .
Population	All the employers who employ MBA Students from Rajasthan .	All the Higher Educational institutions of Rajasthan which teach MBA Course .	All the students who study MBA in Rajasthan .

Proposed Sample Size	At most 60 employers from Manufacturing and Service Sector belonging to Micro, Small, Medium and Large Enterprises.	78 % of the total institutions which teach MBA in Rajasthan.	4 % of total students which study MBA in Rajasthan .The sample may be restricted to Jaipur and nearby regions because of economic constraints.

7.3 Sampling design

a) Population 1: Employers

The population covers all employers across the globe .

The employers can be majorly classified as Manufacturing and Service Sector industries .

India based employers can be classified as Micro , Small and Medium Enterprises based on their investments . Apart from MSME's there are employers which are large enterprises and some of them are multinational companies **.**

Employers will be selected ensuring sector wise from the 24 sectors as defined in National Skill Development policy) and level wise coverage (Micro , Small , Medium and Large scale enterprise) .At most 60 employers will be covered including those who are regularly employing MBA students from MBA institutes of Rajasthan and those who are top contributors to the Rajasthan State Domestic Product as it is expected that they will have greater incremental human resource requirement because of their booming business. While selecting the industries Incremental Human resource requirement sector wise from National Skill Development Policy ,Industry attractiveness matrix ,investments ,industrial output will be considered as a larger share of these will represent more number of employment opportunities .

The sectors which will be considered will be Auto and Auto Components , Beauty and Wellness , Food Processing , Media and Entertainment , Handlooms and Handicrafts ,Leather and Leather goods , Domestic Help ,Gems and Jewellery ,Telecommunication , Tourism , Hospitality and Travel, Furniture and Furnishing , Building , Construction and Real Estate , IT and ITES , Construction material and building hardware , Textile and clothing , Healthcare , Security, Agriculture, Education /skill development , Transportation and logistics , Electronic and IT Hardware , Pharma and Life Sciences, BFSI ,Retail . (Entrepreneurship, 2015)

The placement records of 97 colleges will be studied and then the opinion of the past employers will be taken as they will be aware about the quality of the graduates from these institutes.

50% of colleges are from RTU and BTU and employers selecting MBA students from these institutes will be asked to give their opinion as it is expected that they will be aware about the quality of the graduates from these institutes. The criteria for selection of employers will be as follows –

1.Top GDP contributors in all 24 sectors as specified in National Policy for Skill Development and Entrepreneurship – 24

2. Previous employers employing maximum number of students in Rajasthan in last 5 years – 20

3. Other probable employers from Micro , Small ,Medium and Large Manufacturing and Service Enterprises - 16

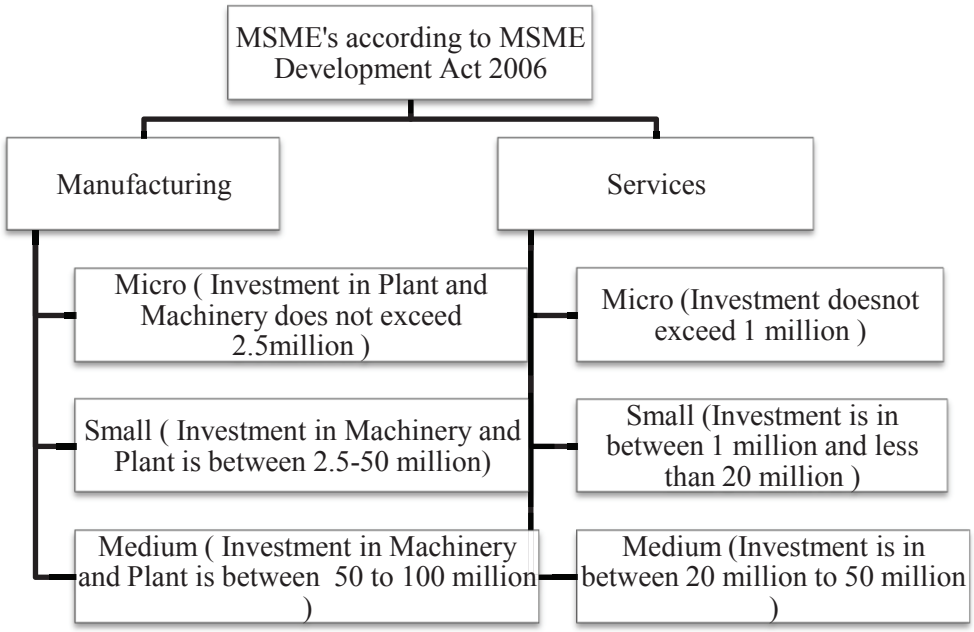
MSME's according to MSME Development Act 2006
Manufacturing
Services
Micro (Investment in Plant and Machinery does not exceed 2.5million)
Micro (Investment doesnot exceed 1 million)
Small (Investment in Machinery and Plant is between 2.5-50 million)
Small (Investment is in between 1 million and less than 20 million)
Medium (Investment in Machinery and Plant is between 50 to 100 million)
Medium (Investment is in between 20 million to 50 million)

Figure 22 Types of Manufacturing and Service Sector Enterprises

b) Population 2: Placement Coordinators of different institutes

The sampling frame selected for educational institutes is Rajasthan as Rajasthan is among the top 10 states in India which have maximum number of colleges .The college density is 33 in Rajasthan . (Government of India, 2018) The literacy rate of Rajasthan is 66.11 percent as

compared to 72.98% in India . (Katiyar, January - June 2018) . The total number of universities in Rajasthan are 83 and there are 4 institutions of National Importance .Out of these 62 universities teach MBA along with 2 Institutions for National Importance .RTU and BTU both have 61 colleges which have MBA Course. There are approximately 123 colleges which teach MBA out of the total 681 affiliated colleges (as per data given on internet). According to Krejcie and Morgan formula at 5% margin of error upto population size 130 sample size should be 97 .So, approximately the opinion of 97 placement officers will be taken if available . Approximately 60 colleges will be from Jaipur , Kota.

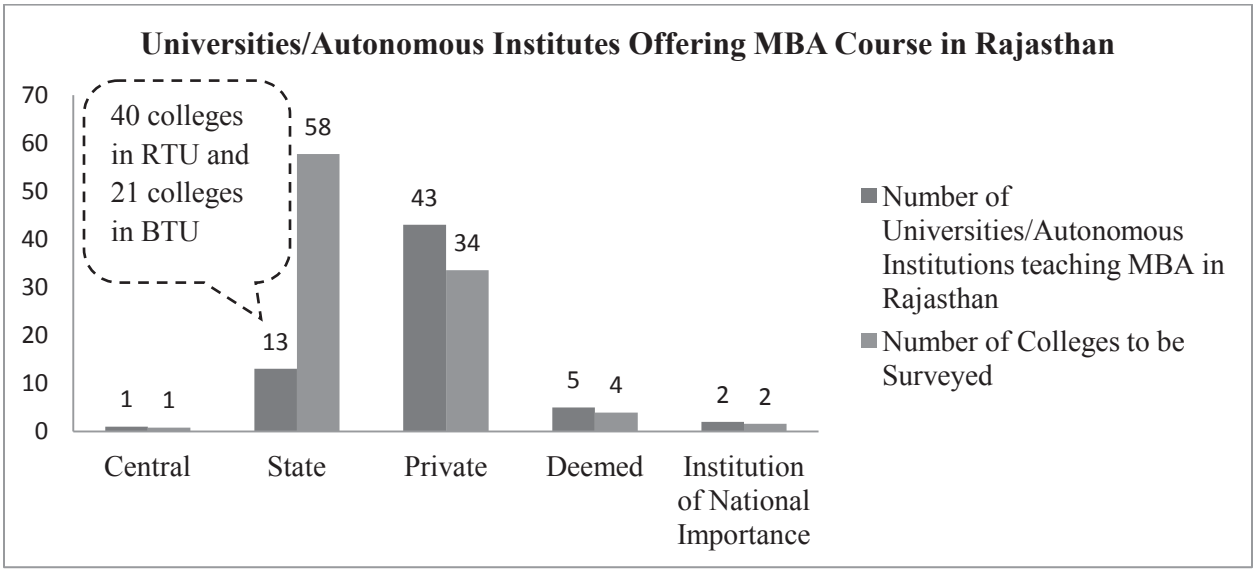

Figure 23 Number of Institutions and Universities Offering MBA in Rajasthan

As the number of colleges are not equally distributed among the different types of universities hence Stratified Random Sampling will be used .The universities and Institutions of National Importance which teach MBA are 64 in number .The total number of constituent and affiliated colleges which teach MBA are approximately 123 out of the total 745 colleges based on internet and data collected by conversation on phone .

c) Population 3: MBA students from Rajasthan

Students will be selected from Jaipur region and Kota region as 50% of colleges are located at these 2 districts and the sample size will depend on the student intake and the availability of students in answering the questionnaire .The probable sample size of students from different

universities will be as described however , it will depend on student willingness to participate in the survey .

Total Number of Seats in Rajasthan in MBA = 9024 (52 universities + 2 Institute of National Importance seats) + 60 (approximately)*10(university seats) =9624

According to Krejcie and Morgan formula at 5% margin of error and upto population size 10000 sample size should be 370 and 4 % of 9624 is 384.96.

However enrollment in MBA in Rajasthan should also be considered. 4114310 students overall in India enroll in Post Graduate Courses and 2.26 lakhs enroll in Management Courses . (Entrepreneurship, 2015) The data on vacant seats is not available else Morgan formula would have been applied on number of students enrolled in MBA in different institutes .

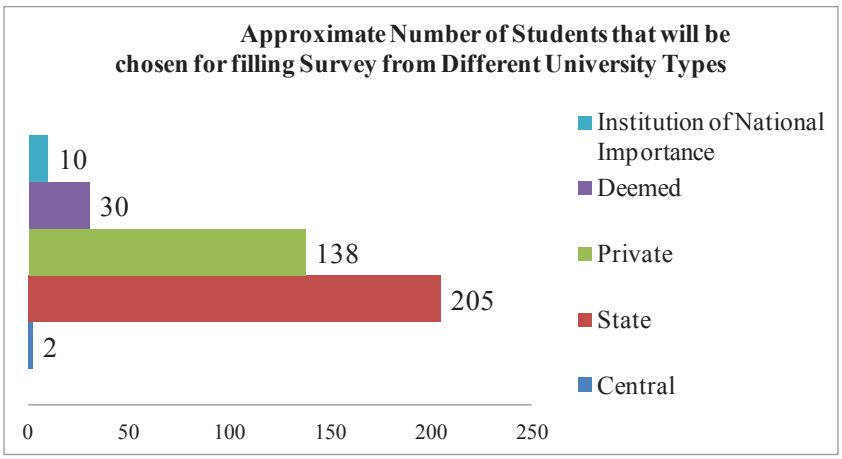

Figure 24 Number of students to be chosen for filling survey from different types of universities / Institutions of National Importance

7.4 Work Plan

	Work Plan for Research		Not Started	Ongoing	Complete									
Research Progress	**Responsible / Supported By**	**Status**	**2018**		**2019**				**2020**				**2021**	
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Task														
PHD Coursework	Joohi	Complete												
Result Declared	IIS University	Complete												
Research Paper Presentation	Joohi	Complete												
Review Paper based on Literature Review	Joohi	Complete												
Presentation of Review Paper in conference	Joohi/ Dr.Mahima Rai	Complete												
Publication of Research Paper in Journal	Joohi	In progress												
Research Plan and Proposal														
Formulation of a Research Problem	Joohi / Dr.Mahima Rai	Complete												
Conceptualising a Research Design	Joohi / Dr.Mahima Rai	Complete												
Constructing an instrument for data collection	Joohi	In progress												
Selecting samples	Joohi/ Dr.Mahima Rai	In progress												
Writing a research Proposal	Joohi/ Dr.Mahima Rai	In progress												
Collecting Data	Joohi	Not started												
Processing Data	Joohi/ Dr.Mahima Rai	Not started												
Writing a research report	Joohi/Dr.Mahima Rai	Not started												
Submission and Approval	Joohi/ Dr.Mahima Rai	Not started												

Figure 25 Work Plan

8. Limitations

1. All the employers cannot be covered because of limitation of resources .Hence a fixed % of the total employers will be considered for the research work .

2. All the institution placement officers can't be covered because of limitation of resources .Hence a fixed % of the total number of institutions will be covered.

3. All the MBA students can't be covered because of limitation of resources .Hence a fixed% of the total number of MBA students will be covered .

4. The present study deals with the employability skills required for MBA students hence level wise variation in skills will not be captured thoroughly.

5. The number of samples chosen might not be a representative fraction of the entire population .Preference will be given to already established institutes before January 2011 as 50 % of institutes were established before 2011.

6. Effectiveness of all desired outcomes is only possible if data is available .

9. Proposed Chapters

Chapter 1 : Introduction

a) Employability and Skill Development in Higher Educational Institutions: A review

b) Employability skills required in Management Graduates

Chapter 2 : Selection Methods , Placement Strategy , Industry Academia linkage and Environmental Factors

a) Challenges in skill development in Management Institutions
b) Factors affecting skill development of Management students
c) Selection Methods used by employers to select Management Institutions
d) Placement Strategies and Existing Industry Academia Linkage in Management Institutes
e) Environmental factors that affect skill development

Chapter 3 : Methodology

a) Introduction to Research Methodology and Research Design
b) Review of Literature
c) Significance of study
d) Objectives of study
e) Hypothesis
f) Work plan and Methodology
g) Sampling and Data Collection Methods
h) Statistical Tools and Hypothesis Testing
i) Limitations of the study

Chapter 4 : Data Analysis and Interpretation

a) Data Collection
b) Data Analysis
c) Data Interpretation

Chapter 5: Conclusion

a) Findings
b) Suggestions
c) Scope of Further Study

6. Bibliography

7. Appendix

7a Questionnaire 1

7b Questionnaire 2

7c Questionnaire 3

10. References and Bibliography

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